

CAA112(r) INSPECTION REPORT

Name: TURPAK FOODS and COMPANIES	
Address: 6201 MacArthur Street Sioux City, IA 51111	Date of Inspection: 02/06-07/18
County: WOODBURY	Case No: 18IA0207
Phone: 712-224-6619	RMP No: 1000 0003 8719
High Risk: No	FRS No: 1100 1002 8549
CAA Title V: No	Program Level: Program 3
Mailing Address: 6201 MacArthur Street, Sioux City, IA 51111	
Process: Anhydrous ammonia refrigeration for perishable prepared food manufacturing, meat processed from carcasses, and poultry processing.	

SUMMARY OF OBSERVATIONS

A review of the TURPAK FOODS and COMPANIES documents and facility revealed the following deficiencies:

1. **TURPAK FOODS and COMPANIES failed to use and retain updated data for the population estimate of the hazard assessment as required by 40 CFR 68.30(c).**
2. **TURPAK FOODS and COMPANIES failed to have written documentation regarding the maximum intended inventory of the regulated substance as required by 40 CFR 68.65(c)(1)(iii).**
3. **TURPAK FOODS and COMPANIES failed to have written documentation on material and energy balances as required by 40 CFR 68.65(d)(1)(vii).**
4. **TURPAK FOODS and COMPANIES failed to meet recognized and generally accepted good engineering practices (RAGAGEP) as required by 40 CFR 68.65(d)(2), specifically: equipment outside and inside facility had rust and scale, needing repainting; eyewash/safety showers, one non-functional (inside machine room) and another too far away (outside the machine room)(ANSI/IIAR 2-2014, sect 6.7.1 and 6.7.3); audible and visual alarms inside machine room and outside of both doors to the machine room missing or not having both functions (ANSI/IIAR 2-2014, sect 6.13.1 (1 and 3)); exhaust ventilation duct vents to outdoors with less than 20 feet from openings into the building (ANSI/IIAR 2-2014 sect 6.14.3.4).**

5. **TURPAK FOODS and COMPANIES failed to update and revalidate process hazard analysis at least every 5 years; current PHA is dated June 2017 and previous PHA was from 2005; required by 40 CFR 68.67(f).**
6. **TURPAK FOODS and COMPANIES failed to retain all PHA documents for the life of the process as required by 40 CFR 68.67(g); earlier and original PHAs missing.**
7. **TURPAK FOODS and COMPANIES failed to fully document training of the employees involved with operating the process, not listing means used to verify that the employee understood the training as required by 40 CFR 68.71(c).**
8. **TURPAK FOODS and COMPANIES failed to perform pre-startup review for changes in their process covered by management of change as required by 40 CFR 68.77(a).**
9. **TURPAK FOODS and COMPANIES failed to perform compliance audits for Subpart D at least every 3 years (last audit was May 2017), they do not have prior audits or documentation (not retaining the latest two records), and do not have documentation showing findings were promptly addressed and deficiencies were corrected as required by 40 CFR 68.79(a, d, and e).**
10. **TURPAK FOODS and COMPANIES failed to develop a written plan of action regarding the implementation of employee participation as required by 40 CFR 68.83(a).**
11. **TURPAK FOODS and COMPANIES failed to verify contractor had documented training of employees, dates trained, and verification that training was understood as necessary to work as contractors to their business, as required by 40 CFR 68.87(b)(5).**
12. **TURPAK FOODS and COMPANIES failed to provide the required correction for the change of emergency contacts within one month as required by 40 CFR 68.195(b).**
13. **TURPAK FOODS and COMPANIES failed to correctly input and correct the 5-year accident history as required by 40 CFR 68.168.**
14. **TURPAK FOODS and COMPANIES failed to correctly identify their facility as a non-responder for accidental releases in the RMP as required by 40 CFR 68.180.**

INTRODUCTION

I, Brian Rasmussen, a Compliance Inspector with the U.S. Environmental Protection Agency (EPA), Region VII, inspected TURPAK FOODS and COMPANIES located in Sioux City, IA on February 6 and 7, 2018.

I arranged for the inspection on 02/01/18 with Mr. Nathan Phipps, Plant Manager. I asked that employees be notified of the inspection and informed they are allowed to participate. TURPAK FOODS and COMPANIES was selected for inspection because of the large number of release incidents they reported in their last RMP.

I conducted the inspection to determine if the facility complies with Section 112(r) of the Clean Air Act (CAA), as amended in 1990. The inspection also included reporting provisions of the Emergency Planning and Community Right to Know Act (EPCRA) and the release reporting provisions of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). EPA's regulations describing how these laws are to be implemented are found in the Code of Federal Regulations, Title 40, Part 68 (CAA), 355, 370, and 372 (EPCRA). The law and the implementing regulations 40 CFR 68, Chemical Accident Prevention Program (CAPP) require that the facilities must submit a complete Risk Management Plan (RMP) to the EPA for those regulated chemicals they process in amounts above the applicable threshold quantities after June 21, 1999 and to implement the program described in the RMP.

All attachments mentioned in this inspection report are also in a folder on the accompanying DVD. The folder numbers on the DVD correspond to the attachment numbers. As an example, Attachment #2 is in Folder #2. Attachments may not contain all documents or parts of documents collected at the time of the inspection, however the accompanying folder on the DVD will have the complete document(s). The DVD itself is Attachment #20 and contains a copy of this inspection report, the original documents obtained, photographs taken during the inspection, the RMP current at the time of the inspection, emails between TURPAK FOODS and COMPANIES and the compliance inspector, checklists, and completed forms.

HISTORY OF BUSINESS

TURPAK FOODS and COMPANIES (TPF) is a single-facility, family-owned, private business located near Sergeant Bluff, IA, south of Sioux City. The company has been in business for over 30 years, originally operating from an industrial location in downtown Sioux City. The business moved to the current location in the mid-90s, acquiring a building first constructed and used by the US Air Force. The facility is a 3 story building, 185,000 square feet, and is sited on 8.5 acres of land.

TPF produces prepared foods as a contract vendor to larger companies. The business requires substantial manpower employing approximately 500 people on a daily basis, about 300 as full time, non-union employees, and 200 temporary employees. They usually operate 3 shifts, 2 for production and 1 for cleaning/sanitation. The facility operates 5 or 6 days a week, depending on seasonal demands.

TPF is on the southern edge of Sioux City, IA, just off highway I-29 and before the Missouri River to the west. It is next to a small airport and the base for an Iowa Air National Guard unit, 185th Air Refueling Wing, that is stationed there. The larger part of Sioux City is north of the TPF site, and the population in 2016 was estimated at 82,872, which is little changed since 1990. The small city of Sergeant Bluff, just across I-29 from TPF has a 2016 population estimate of 4,551 which is steady growth since 1990 when that population was about 3,000.

TPF operates a refrigerated facility that uses 17,400 pounds of anhydrous in their closed loop, flooded system. Anhydrous ammonia is the regulated substance, and the threshold amount is 10,000 pounds.

PERSONS INTERVIEWED AND INDIVIDUAL RESPONSIBILITIES

Mr. Nathan Phipps.....Plant Manager
Mr. Nick Thiesen.....Maintenance Manager

OPENING CONFERENCE

I arrived at the TPF site at 8:00 am on 02/06/18 to begin my inspection. I signed in, met Mr. Phipps, and was escorted to the conference room where we would conduct the inspection. I presented my credentials and provided some background on my personal experience. Mr. Thiesen was also in the room, and I worked with these 2 individuals during the inspection. I explained the process we would use and introduced the required forms that would be used and signed. After answering procedure questions, we began the inspection.

EPCRA TIER II

TPF has a current EPCRA Tier II form covering January through December 2017 on file, and it is at Attachment #4. This report lists a maximum daily amount of anhydrous ammonia at 17,400 pounds, and an average daily amount of 12,000 pounds. These values were unchanged from those submitted on the Tier II for year 2016.

HAZARD ASSESSMENT

TPF provided the hazard assessment documentation for their facility. The information provided was from year 2000, but Mr. Phipps provided a form they complete annually after they review and update (as necessary) the assessment. That document shows a review conducted and dated 06/02/17. The worst case scenario and the alternate release case were unchanged. The one area identified as not meeting the regulatory requirement was that they had not used or obtained updated population estimates for the worst case and alternate release scenarios. The population used was from 2000. I find the following deficiency:

- 1. TURPAK FOODS and COMPANIES failed to use and retain updated data for the population estimate of the hazard assessment as required by 40 CFR 68.30(c).**

Hazard assessment documentation is in Attachment #5.

PROCESS SAFETY INFORMATION (PSI)

TPF has a copy of the safety data sheet for anhydrous ammonia from their supplier, Tanner Industries. The revision date is May 1, 2015, and the first 2 pages are in Attachment #6. Documentation was available for block flow/simplified flow diagram, process chemistry, safe

upper and lower limits for temperatures, pressures, and flows, and consequences of deviation. Missing was the maximum intended inventory documents, and so I find the following deficiency:

2. TURPAK FOODS and COMPANIES failed to have written documentation regarding the maximum intended inventory of the regulated substance as required by 40 CFR 68.65(c)(1)(iii).

TPF had written information on the equipment in the process including materials of construction, piping and instrument diagrams, electrical classification, relief systems, ventilation systems, design codes and standards, and safety systems. TPF operates 9 compressors, with one screw compressor and 8 reciprocal compressors. Two are used for the low side, and 7 are on the high side, one of those used as a swing machine. The system includes 2 condensers, 35 evaporators, 3 accumulators, and one high pressure receiver. They lacked documentation for material and energy balances, and so I find the following deficiency:

3. TURPAK FOODS and COMPANIES failed to have written documentation on material and energy balances as required by 40 CFR 68.65(d)(1)(vii).

During the tour of the facility, I also observed some items that did not appear to meet recognized and generally accepted good engineering practices (RAGAGEP) as prescribed by ANSI/IIAR 2-2014. Based on that, I find the following deficiency:

4. TURPAK FOODS and COMPANIES failed to meet recognized and generally accepted good engineering practices as required by 40 CFR 68.65(d)(2), specifically: equipment outside and inside facility had rust and scale, needing repainting; eyewash/safety showers, one non-functional (inside machine room) and another too far away (outside the machine room)(ANSI/IIAR 2-2014, sect 6.7.1 and 6.7.3); audible and visual alarms inside machine room and outside of both doors to the machine room missing or not having both functions (ANSI/IIAR 2-2014, sect 6.13.1 (1 and 3)); exhaust ventilation duct vents to outdoors with less than 20 feet from openings into the building (ANSI/IIAR 2-2014 sect 6.14.3.4).



Rusted equipment
outside TPF facility

Non-operational eye
wash station in TPF
engine room.



The exhaust ventilation duct in particular presents a problem because it vents at grade level in the front of the building. Two openings to the building are within 20 feet of the exhaust and if venting ammonia, it would be at a level that could injure people outside the building that were present near it.

Documentation regarding TPF's process safety information is in Attachment #6.

Post-inspection, I received information from TPF regarding maximum intended inventory, material and energy balances, and corrective actions taken or planned for RAGAGEP issues.

PROCESS HAZARD ANALYSIS (PHA)

TPF had some documentation from the current and some prior process hazard analysis reports. Mr. Phipps said he thought other PHAs had been performed, but no documentation is available and those reports were not retained. TPF has a current PHA done in June 2017 but the only prior PHA document available was from August 2005. The current 2017 PHA is appropriate in complexity for the process, uses the WHAT IF/CHECKLIST method, and addresses the key elements. The PHA team included knowledgeable people including members that worked in the refrigeration process. The 2005 PHA also addressed the required elements and included an appropriate team. Again, other PHAs were not found, so the original PHA and the required updates/revalidations at least every 5 years are not present. The first 8 pages of the 2017 and the 2005 PHAs are at Attachment #7, and the entire reports are in Folder 7.

Based on the failure to update the PHA at least every 5 years and due to not retaining all PHA documents for the life of the process, I find the following deficiencies:

- 5. TURPAK FOODS and COMPANIES failed to update and revalidate process hazard analysis at least every 5 years; current PHA is dated June 2017 and previous PHA was from 2005; required by 40 CFR 68.67(f).**
- 6. TURPAK FOODS and COMPANIES failed to retain all PHA documents for the life of the process as required by 40 CFR 68.67(g); earlier and original PHAs missing.**

STANDARD OPERATING PROCEDURES (SOPs)

TPF has SOPs covering the essential operations of their process. The SOP for the High Pressure Receiver, High Pressure Compressors, and Evaporators are in Attachment #8 as examples of the SOPs used by TPF. Employees have access to the SOPs on the company intranet, T-drive, which is accessible on available computer stations. SOPs are also available as written documents in the supervisor's office. SOPs are reviewed by team members and certified annually as accurate and current. A copy of the certification sheet used is in Attachment #8.

SOPs and permits for lock-out/tag-out, line break, and hot work are in Attachment #8. TPF does not perform any confined space work. The process area is maintained secure by signage indicating only authorized personnel are allowed to enter the machine room, and by locked fencing around equipment sited outside of the building. The fenced enclosure has a gate with push-bar exit to the open area.

TRAINING

TPF does provide training for employees involved with the process, but no records were presented or reviewed showing initial training. A record showing names and dates for a training review and program summary shows discussion with the team members involved with the ammonia process and it is in Attachment #9. TPF sends mechanics involved with the refrigeration system for training at the Garden City program on an as needed basis. The program review and program summary is used for the required refresher training but that document does not list the specific items trained/reviewed or show that the hazards of the process included in the training. The records kept by TPF do not list specific subjects trained or the means used to verify that the employee understands the training. Based on this, I find the following deficiency:

- 7. TURPAK FOODS and COMPANIES failed to fully document training of the employees involved with operating the process, not listing the subjects trained or means used to verify that the employee understood the training as required by 40 CFR 68.71(c).**

MECHANICAL INTEGRITY

TPF generally follows manufacturer's recommendations and industry standards in maintaining the equipment in the process, with some RAGAGEP issues, previously cited. They have loaded the requirements for the preventive maintenance program in a computer system that lists routine check/inspection/replace requirements. A computer generated work order is prepared and when the designated work is completed, the results are logged into the system and the order is closed. They also follow a daily check log system to track performance of the machinery and to watch for potential problems. I asked Mr. Thiesen about their procedure when equipment deficiencies were found and he told me the specific equipment would be shut down and not re-used until full repairs were made. All spare parts for process equipment are ordered and received by the refrigeration group and only like-for-like parts are accepted, verified by that group.

Examples of log sheets and work orders are in Attachment #10.

MANAGEMENT OF CHANGE (MOC) & PRE-STARTUP SAFETY REVIEW (PSSR)

TPF has a process and associated forms for implementing and tracking changes. They have had very few changes on the refrigeration system, but the change for replacing two smaller compressors with one larger compressor for the high side requirements was reviewed. Documents for MOC number 20161123-001 are in Attachment #11. This work is appropriately documented, following the required MOC procedures, however the pages with approval signatures and dates are unsigned. Another MOC from 2011 was also reviewed, and MOC 2011-20-05 is in Attachment #11. That change, a replacement of a cooling tower, was noted as a major change, needing a formal PHA to be performed, but TPF has no records from a PHA during that time period. (Missing PHA documents has already been addressed in the PHA section with appropriate deficiencies noted.)

A PSSR was performed and recorded for MOC number 20161123-001 and it meets all the required elements. No PSSR was found with the earlier change, MOC number 2011-20-05 and it

could not be substantiated that a PSSR was properly performed for that project. I find the following deficiency:

- 8. TURPAK FOODS and COMPANIES failed to perform pre-startup review for changes in their process covered by management of change as required by 40 CFR 68.77(a).**

COMPLIANCE AUDIT

TPF presented a compliance audit that was completed in May 2017. They did not have a prior compliance audit and failed to retain the two most recent audits as required by regulation. The documentation included a list of compliance audit team members, a checklist for the elements of Subpart D, and a listing of findings. A review of the checklist, however, shows TPF had certain items that were not found during this inspection. Some examples are maximum intended inventory (§68.65(c)(1)(iii)), RAGAGEP (§68.65(d)(2)), and compliance audits (§68.79(c)(e)). The findings listed in the certification page do not show any plan for addressing the deficiencies or projected completion dates. Based on these issues, I find the following deficiency:

- 9. TURPAK FOODS and COMPANIES failed to perform compliance audits for Subpart D at least every 3 years (last audit was May 2017), they do not have prior audits or documentation (not retaining the latest two records), and do not have documentation showing findings were promptly addressed and deficiencies were corrected as required by 40 CFR 68.79(a, d, and e).**

The compliance audit of May 2017 for TPF is in Attachment #12.

INCIDENT INVESTIGATION

The inspection at TPF was partially based upon information in their 2015 RMP Executive Summary which stated there were 78 minor releases. The accident section listed a 2,000-pound ammonia release on July 9, 2014. TPF has a procedure and documentation for incident investigation and those forms are in Attachment #13. Additionally, in the attachment are investigation reports for two separate incidents, one on December 15, 2017 for a pump seal failure (incident #0039) and the other from October 18, 2016 for activation of a safety relief valve (incident #10182016-001). These reports indicate the investigations are generated in a timely fashion (within 48 hours of the incident) and the reports show they consider the required investigation elements. Regarding the accident reported in the 2015 RMP, TPF representatives Nathan Phipps and Nick Thiesen said they do not believe the accident listed in the RMP actually occurred and may erroneously have been entered. No notice was given to the National Response Center, and for a listed accident on 9 July 2014 releasing 2,000 pounds of ammonia in 25 minutes, this should have been reported. During the inspection I requested to see the incident report for this accident and they had nothing to present, again stating that they did not believe this accident occurred. They also thought that if an incident did occur on that date, the quantity released was misstated. The incident logs they maintain did not have any similar accident listed nor was there any listing of a quantity this large (2,000 pounds). I investigated this further, calling the Sioux City fire department and the fire department at the Iowa Air National Guard

base, next to the TPF site. Sioux City fire department does inspect TPF annually, last inspection in August 2017. Per Ms. Jennifer Lowell they had no record of responding for 07/09/14, the date of reported in the RMP for the accident at TPF. Also, the IANG fire department at the air base next to TPF has no record of any reports or responding calls on 07/09/14 per Mr. Don Bochemmann. I contacted the LEPC for Woodbury County and spoke to Lt. Don Armstrong of the Woodbury County Sheriff's Department. He had the records checked and advised me they have no record or any release report from TPF on 07/09/14. TPF is included in the community emergency response plan. Based on this information, it appears likely that the accident information in the RMP was erroneous. The RMP was prepared and submitted by Nathan Phipps.

A summary of incidents documented by TPF is below. None of the separate incidents were for quantities over 100-pounds.

TPF Incident Summary		
Year	Incidents	Quantity Lost
2013	13	370 pounds
2014	16	490 pounds
2015	15	375 pounds
2016	7	192 pounds
2017	7	127 pounds

TPF also provided summary sheets of the incidents for the last 5 years showing the total number of incidents each year and the estimated quantity of ammonia released. That information is included in Attachment #13.

EMPLOYEE PARTICIPATION

TPF uses a form to notify employees of elements of the Process Safety Management program, including employee involvement. This form, which is in Attachment #14, is reviewed with each employee and they are required to sign acknowledging receipt of that information. It does not seem to meet the requirement for the owner to develop a written plan of action regarding implementing employee participation. TPF does have involvement and participation from employees on PHA and other elements of process safety management, such as SOPs. I find the following deficiency:

- 10. TURPAK FOODS and COMPANIES failed to develop a written plan of action regarding the implementation of employee participation as required by 40 CFR 68.83(a).**

HOT WORK PERMIT

TPF has a procedure for hot work, and they use permits to control the work. Per Mr. Thiesen, hot work is infrequently performed, just when needed, but they do their own hot work when conditions require it. An example of the permit is in Attachment #15.

CONTRACTORS

TPF uses a limited number of contractors, currently using one contractor for repair or added work on the ammonia system. They execute an agreement document with the contractor that specifically identifies the contractor duties and requirements for providing services to TPF. They obtain a signature from the contractor acknowledging the items in the agreement and the contractor's responsibilities for insuring contractor workers abide by all worksite rules. This procedure does not involve verification that individual workers from the contractor have been trained on the hazards of the process, dates trained, and verified training was understood. I find the following deficiency:

- 11. TURPAK FOODS and COMPANIES failed to verify contractor had documented training of employees, dates trained, and verification that training was understood as necessary to work as contractors to their business, as required by 40 CFR 68.87(b)(5).**

Documentation for the contractor program at TPF is in Attachment #16.

EMERGENCY RESPONSE

TPF is a non-responding facility in the event of a large or uncontrolled release of ammonia from their system. They will depend on the local fire departments and the LEPC for assistance in those circumstances. The facility is located next to an air base manned by units of the Iowa Air National Guard, and that organization has full-time fire and emergency responders on duty. They also receive an inspection by the Sioux City Fire Department every year. TPF is included in the LEPC community emergency response plan. They have an emergency action plan, and it is in Attachment #17. The facility has an alarm system that notifies responders when an emergency occurs. They use Midwest Alarms which has 24-hour monitoring. Other communications can be by 2-way radio (used on the production floor), land line phones, or cell phones.

MANAGEMENT SYSTEM

TPF has a management system and the documents relating to it are in Attachment #18. The plant manager, Nathan Phipps, is the primary person responsible for the TPF RMP plan. They also list others that have responsibility and involvement with the RMP, including Nick Thiesen.

RISK MANAGEMENT PLAN

TPF has a current RMP and it is in Attachment #3. The 5-year update was received on time, receipt date of 9 January 2015. Several items in the RMP were incorrect and in need of correction. The first item that is not correct is the emergency contact information. The person listed on the RMP has been gone for over a year and no correction/update was submitted. I find the following deficiency:

12. TURPAK FOODS and COMPANIES failed to provide the required correction for the change of emergency contacts within one month as required by 40 CFR 68.195(b).

Additionally, based on information previously covered in the Incident Investigation section, the RMP submitted by TPF in 2015 included incorrect information relating to their accident history. I find the following deficiency:

13. TURPAK FOODS and COMPANIES failed to correctly input and correct the 5-year accident history as required by 40 CFR 68.168.

In Section 9, Emergency Response, TPF has acknowledged that they are included in the community plan, which is correct. However, in the remaining information fields, they claim to have the elements required for responding facilities. TPF is a non-responding facility and the current RMP does not reflect that fact. I find the following deficiency:

14. TURPAK FOODS and COMPANIES failed to correctly identify their facility as a non-responder for accidental releases in the RMP as required by 40 CFR 68.180.

Post inspection, Mr. Nathan Phipps advised that he is submitting a corrected RMP.

CLOSING CONFERENCE

I met with Mr. Phipps and Mr. Thiesen to close-out the inspection. Forms were all completed, including the Confidentiality Notice, where TPF did not claim any CBI. The preliminary findings were explained and discussed. After thanking them for their efforts and attention to the RMP inspection, I answered final questions, gathered my materials, and departed the facility.



Brian Rasmussen
Compliance Inspector

Date: 02-27-18

ATTACHMENTS

- | | |
|-----------------------------------|--------------------------------|
| 1 – Inspection Forms | 11 – Management of Change/PSSR |
| 2 – Aerial Maps | 12 – Compliance Audit |
| 3 – Risk Management Plan | 13 – Incident Investigation |
| 4 – EPCRA Tier II | 14 – Employee Participation |
| 5 – Hazard Assessment | 15 – Hot Work |
| 6 – Process Safety Information | 16 – Contractors |
| 7 – Process Hazard Analysis | 17 – Emergency Plan |
| 8 – Standard Operating Procedures | 18 – Management |
| 9 – Training | 19 – Photo Log |
| 10 – Mechanical Integrity | 20 – DVD – Attached to Report |